



**PATENT**  
Attorney Docket No. 213653  
Client Reference No. OFX042WUS/RF

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

In re Application of:

Daniele Venturini

Application No. 09/937,941

Filed: January 25, 2002

For: BONE SCREW FOR USE IN  
ORTHOPAEDIC SURGERY

Art Unit: 3732

Examiner: Philogene, Pedro

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**PENDING CLAIMS AFTER AMENDMENTS**  
**MADE IN RESPONSE TO OFFICE ACTION DATED November 21, 2002**

2. A bone screw according to claim 11 characterised in that said shaped bottom land has in cross-section an obtuse angle ( $\beta$ ) of conical convergence towards the longitudinal axis of the screw.
3. A bone screw according to Claim 2, characterised in that said obtuse angle ( $\beta$ ) is an angle of at least 150°.
4. A bone screw according to claim 11, in which the acute angle of the cross-sectional profile of said teeth is in the range of 15° to 30°.
5. A bone screw according to claim 11, characterised in that said constant pitch is of 1.25mm.
6. A bone screw according to claim 11, characterised in facing walls of adjacent threads have in cross-section an acute angle ( $\alpha$ ) of conical convergence towards the longitudinal axis of the screw.
7. A bone screw according to Claim 6, characterised in that said acute angle ( $\alpha$ ) is an angle in the 15° to 30° range.

8. A bone screw according to claim 1, characterised in that the threaded portion (5) accounts for [about] one third of the screw length.

9. A bone screw according to claim 11, characterised in that the height of the thread is three fifths the pitch length.

10. A bone screw according to Claim 9, characterised in that said height is 0.75mm.

11. A bone screw for use in orthopedic surgery with external fixture fixation devices comprising a head, a shank, and a threaded portion having an outside diameter and a core diameter which tapers toward a tip at an end opposite from the head, said threaded portion having at least one constant pitch section, said threaded portion having threads formed with an acute angle generally triangular cross-sectional profile, said threads being separated from each other by a shaped bottom land having a concave profile defined by two countersloping planes, and said threads having a constant height with the ratio of the outside diameter to said core diameter within a range of 1.43 to 1.60.

Amendment or ROA - Regular (Rev. 9/10/02)